DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-020226
Date Inspected: 02-Feb-2011

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 900
OSM Departure Time: 1730
Location: Jobsite

CWI Name:	See below			**CWI Present:**	☑ Yes	☐ No	
Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Approved WPS:**	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: SAS OBG

Summary of Items Observed:

On this date CALTRANS OSM Quality Assurance Inspector (QAI) Bert Madison was present at Yerba Buena Island in California between the times noted above for observations relative to the work being performed by American Bridge/Fluor Enterprises (AB/F) personnel at the locations noted below.

1). Longitudinal Stiffener (ALS) Splices at OBG Field Splice 2W/3W (SMAW)
2). Deck Access Hole (DAH) Long. Stiffener West (LSW) Splice at OBG 3W PP19.5 5W
3). Deck Access Hole (DAH) Insert Weld at OBG 2W PP13.5 W5 (SMAW Interior R-1 Repairs)
4). Deck Access Hole (DAH) Insert Weld at OBG 3W PP19.5 W5 (SMAW Interior R-1 Repairs)
5).Deck Access Hole (DAH) Insert Weld at OBG 3W PP19.5 W5 (SMAW Exterior R-1 Repairs)
6).Deck Access Hole (DAH) Insert Weld at OBG 3W PP23.5 W2 (SMAW Exterior R-1 Repairs)
7). Deck Access Hole (DAH) Insert Weld at OBG 3W PP19.5 W2 (QC UT)
8). OBG Field Splice 1W/2W A Longitudinal Stiffeners (QA verification)
9). Deck Access Hole (DAH) Long. & Transverse Stiffener (LS) and (TS) (QAI Verification)

1). Longitudinal Stiffener (ALS) Splices at OBG Field Splice 2W/3W (SMAW)
ALS-3

The QAI periodically observed AB/F approved welder Xiao Jian Wan (ID 9677) at OBG Field Splice 2W/3W ALS-3 performing welding of butter passes per the Shielded Metal Arc Welding (SMAW) process in the 3G (vertical) position. QC Inspector Gary Ehrsam was present periodically to monitor the progress and verify that the welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-1012-3. The QAI observed that the butter pass welding was in process and the work at this location appeared to be in general compliance with contract documents.

2). Deck Access Hole (DAH) Long. Stiffener West (LSW) Splice at OBG 3W PP19.5 5W LSW
The QAI periodically observed AB/F approved welder Hua Qiang Hwang (ID 2930) at OBG 3W PP19.5 5W setting up to perform welding per the Shielded Metal Arc Welding (SMAW) process in the 3G (vertical) position. The welding was not begun at this location during the QA Inspectors Shift.

3). Deck Access Hole (DAH) Insert Weld at OBG 2W PP13.5 W5 (SMAW Interior R-1 Repairs)
The QAI periodically observed AB/F approved welder Wen Han Yu (ID 6317) performing R-1 repair welding per the Shielded Metal Arc Welding (SMAW) process in the 4G (overhead) position on the interior of the DAH Insert Weld at OBG 2W PP13.5 W5. See photo below. QC Inspector Gary Ehrsam was present to monitor the progress and verify that the welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-1001 Repair. Welding of what appeared to be one continuous excavation extending the entire circumference of the insert was in process and the QAI observed the work at this location appeared to be in general compliance with contract documents.

4). Deck Access Hole (DAH) Insert Weld at OBG 3W PP19.5 W5 (SMAW Interior R-1 Repairs)
The QAI periodically observed AB/F approved welder Wai Kitlai (ID 2953) performing R-1 repair welding per the Shielded Metal Arc Welding (SMAW) process in the 4G (overhead) position on the interior of the DAH Insert Weld at OBG 3W PP19.5 W5. QC Inspector Gary Ehrsam was present to monitor the progress and verify that the welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-1001 Repair. Welding of two excavated areas was completed and the QAI observed the work at this location appeared to be in general compliance with contract documents. The QAI observed that the repair areas excavated had the following dimensions and the following Y locations:
#1 Y = 1865mm, Length =165mm, Depth = 10mm, Width = 22mm.
#2 Y = 3205mm, Length = 180mm, Depth = 10mm, Width = 20mm.

5).Deck Access Hole (DAH) Insert Weld at OBG 2W PP13.5 W5 (SMAW Exterior R-1 Repairs)
The QAI periodically observed AB/F approved welder Wai Kitlai (ID 2953) performing grinding to excavate R-1 repair areas on the exterior of DAH OBG 2W PP13.5 W5. Grinding of excavations was in process.
6).Deck Access Hole (DAH) Insert Weld at OBG 3W PP23.5 W2 (SMAW Exterior R-1 Repairs)
The QAI periodically observed AB/F approved welder Jin Pei Wang (ID 7299) performing R-1 repair welding per the Shielded Metal Arc Welding (SMAW) process in the 1G (flat) position on the exterior of the DAH Insert Weld at OBG 3W PP23.5 W2. QC Inspector Steve McConnell was present to monitor the progress and verify that the welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-1001 Repair. Welding of one excavated area was completed and welding of one excavated area was in process at the end of the shift. The QAI observed the work at this location appeared to be in general compliance with contract documents. The QAI observed that the repair areas were numbered by QC and the excavated areas had the following dimensions and the following Y locations:
Indication #7 - Y = 3690mm, Length = 85mm, Depth = 17mm, Width = 25mm (weld comp.)
Indication #2 – Y = 630mm, Length =95mm, Depth = 16mm, Width = 25mm (welding in process.)

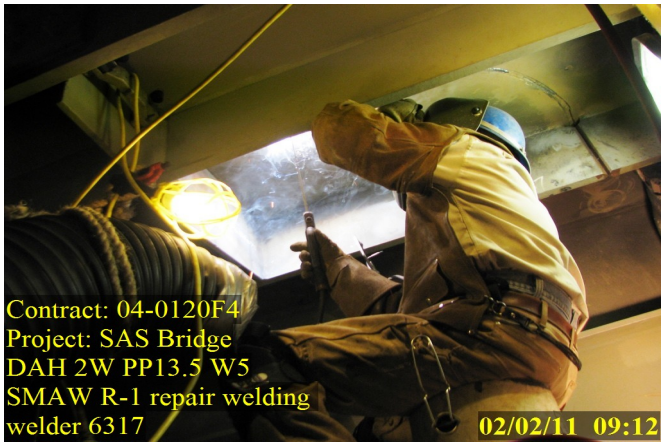
7). Deck Access Hole (DAH) Insert Weld at OBG 3W PP19.5 W2 (QC UT)
The QAI periodically observed QC Inspector Steve McConnell performing UT from the A Face of OBG 3W PP19. 5 W2 DAH Insert Weld. The QAI randomly observed that Mr. McConnell utilized the UT Procedure identified as

SE-UT-D1.5-CT-100 Rev.4 during the examination of the transverse splice weld. The QC technician performed the required shear wave testing during the testing for weld soundness utilizing a .63 x .75 rectangular transducer. The UT examination was completed during the QA Inspectors shift and the QAI observed that Mr. McConnell identified (14) fourteen separate indications for repair. See photo below. The QAI observed that work at this location appeared to be in general compliance with contract documents.

8). OBG Field Splice 1W/2W A Longitudinal Stiffeners (QA verification)
The QAI performed verification Ultrasonic Testing (UT) of 100% of the lengths of OBG Field Splice 1W/2W ALS 4, 5 & 6. The OBG Field Splices verified by the QAI appeared to be in general compliance with contract documents. See Ultrasonic Testing Report Form TL-6027 generated by the QAI on this date.

9). Deck Access Hole (DAH) Long. & Transverse Stiffener (LS) and (TS) (QAI Verification)
The QAI performed verification Ultrasonic Testing (UT) of 100% of the lengths of OBG Field Splices of DAH Stiffeners; LS- East, LS-West and the Transverse Stiffeners at the following location:
OBG 1W PP10.5 W5.
The OBG Field Splices verified by the QAI at this location appeared to be in general compliance with contract documents. See Ultrasonic Testing Report Form TL-6027 generated by the QAI on this date.

In addition to the photographs below QA documented most of the above noted observations in the form of digital photographs which are maintained by METS and are available upon request.



Summary of Conversations:
Conversations on this date with Quality Control Inspectors were general in nature and pertained to locations of welding and QC activities and locations of welds released to the QAI for verification testing.

Comments
This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Sang Le (916) 764 5650, who represents the Office of Structural Materials for your project.

WELDING INSPECTION REPORT

(Continued Page 4 of 4)

Inspected By:	Madison,Bert	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer